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10/594,503	09/28/2006	Hidenori Komatsumoto	Q97008	3650

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EXAMINER	
PAPPAS, PETER-ANTHONY	

ART UNIT	PAPER NUMBER
2628	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/594,503	KOMATSUMOTO, HIDENORI	
	Examiner	Art Unit	
	PETER-ANTHONY PAPPAS	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 October 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 September 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1-6 are objected to because of the following informalities: said claims recite the limitation "having at least one of a speed and distance of movement" which should instead read "having a speed of movement." Appropriate correction is required.

2. Claims 7-12 are objected to because of the following informalities: said claims recite the limitation "having at least one of a speed and distance of movement" which should instead read "having a distance of movement." Appropriate correction is required.

3. Claims 7-12 are objected to because of the following informalities: said claims recite the limitation "the value of the distance data." There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 6 and 12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Said claim discloses a “computer readable data storage medium” (line 1). Both said claims and the respective specification (p. 3, line 27, to p. 4, ll. 1-2) fail to disclose whether said “computer readable medium” is limited to a non-transitory medium or transitory propagating signal. Reading said claims under the broadest reasonable interpretation a “computer readable data storage medium” is considered to read on a transitory propagating signal. See the Subject

Matter Eligibility of Computer Readable Media memo dated February, 23 2010 (1351 OG 212). A claim directed to only signals per se is not a process, machine, manufacture, or composition of matter and therefore is not directed to statutory subject matter. See MPEP § 2106. Thus, both said claim and said specification fail to define said "computer readable data storage medium" to be statutory media.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. In regard to claims 1-6 the limitations "calculating distance data," "based on the distance data" and "as distance data becomes larger" are considered unclear as it is not evident whether "distance data" refers to a container (e.g. a data structure) of distance information, which is stored in memory, or an actual distance value (e.g., a numeric distance value). In other words it is not evident whether the amount of memory required to store a distance value is increasing or a distance value (e.g., actual distance between two points) is increasing. The specification discloses "...the distance data may be data indicative of a distance between a position associated with the object and a position of the viewpoint." (p. 5, ll. 13-15). For the purposes of applying prior art "calculating distance data," "based on the distance data" and "as distance data becomes larger" are

considered to read on “calculating a distance value,” “based on the distance value” and “as the distance value becomes larger,” respectively.

8. In regard to claims 7-12 the limitations "calculating distance data," "based on the value of the distance data" and "the value of the distance data becoming larger" are considered unclear as it is not evident whether "distance data" refers to a container (e.g. a data structure) of distance information, which is stored in memory, or an actual distance value (e.g., a numeric distance value). Furthermore, it is not evident whether a "value" of "distance data" represents an actual distance or a property of said data other than an actual distance (e.g., amount of memory occupied by a data structure containing distance data). In other words it is not evident whether the amount of memory required to store a distance value is increasing or a distance value (e.g., actual distance between two points) is increasing. The specification discloses “...the distance data may be data indicative of a distance between a position associated with the object and a position of the viewpoint.” (p. 5, ll. 13-15). For the purposes of applying prior art "calculating distance data," "based on the value of the distance data" and "the value of the distance data becoming larger" are considered to read on "calculating a distance value," "based on the distance value" and "the distance value becoming larger," respectively.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

10. Claims 1-3, 5-9, 11 and 12 are rejected under 35 U.S.C. 102(a) as being anticipated by Kamiwada et al. (U.S. Pub. No. US 2004/0141014 A1).

11. In regard to claim 1 Kamiwada et al. teach an image processing device (e.g., computer; p. 1, ¶ 2; Fig. 2) for displaying an image representative of a picture of an object viewed from a viewpoint in a virtual 3D space where the object (e.g., observation point 403) and the viewpoint are placed, said object having a perceived speed of movement (e.g., felt movement speed) in the 3D space ("FIG. 15 is a diagram showing a display example of the three-dimensional data browsing screen. FIG. 16A through FIG. 16D are diagrams showing examples of changes of a three-dimensional data browsing screen in a case of approaching the viewpoint to the information object." – p. 3, ¶s 40, 41; "An observation point 403 shows a location to be observed on the information object within a current view of the user. It should be noted that the observation point 403 is a intersection of a center line of the view and the target surface." – p. 4, ¶s 68, 71; "…the movement distance d of the observation point T is calculated. That is, the view determining part 104 calculates the movement distance d by giving the movement direction vector t obtained in the step S124 to the view movement calculating part 107. The view movement calculating part 107 calculates the movement distance of an observation point according to the distance of the viewpoint V0 and the observation point T…" – p. 6, ¶ 101; "…in a case in which the viewpoint location is located far from the three-dimensional information object and the view movement operation is conducted broadly, the movement speed is felt slower than

expected. In a case in which the viewpoint location is located closer the three-dimensional information object and the view movement operation is conducted for a detailed portion, the movement speed is felt faster than expected." – p. 9, ¶ 147; Figs. 4B, 11, 12A, 13, 15, 16A-16D).

Kamiwada et al. teach: a distance data calculation means (e.g., view determining part 104) for calculating distance data concerning the object (e.g., observation point 403) and the viewpoint (p. 6, ¶ 101); moving state determination means (e.g., view movement calculating part 107) for determining a perceived moving speed (e.g., felt movement speed) of the object (e.g., observation point 403) in the virtual 3D space, based on the distance data ("…in a case in which the viewpoint location is located far from the three-dimensional information object and the view movement operation is conducted broadly, the movement speed is felt slower than expected. In a case in which the viewpoint location is located closer the three-dimensional information object and the view movement operation is conducted for a detailed portion, the movement speed is felt faster than expected." – p. 9, ¶ 147); object moving means (e.g., view determining part 104) for moving the object in the virtual 3D space based on the perceived moving speed of the object, which is determined by the moving state determination means ("…the view determining part 104 searches for a point which moves only by the distance d in the positive direction t along the target surface from the current observation point T as a new observation point T…" – p. 6, ¶ 102; p. 9, ¶ 147).

It is noted that the respective claim language discloses "whereby the moving speed of the object in the three-dimensional space becomes slower as the distance

data becomes larger." It is noted that said respective claim language fails to disclose that movement speed (e.g., perceived movement speed) decreases only as a direct result of said distance value first increasing. In other words said limitation merely discloses that there is a correlation between a decrease in movement speed (e.g., perceived movement speed) and a distance value increasing in value. It is noted that said limitation fails to disclose the specifics of said correlation.

It is further noted that said correlation between an increase in distance and a perceived decrease in movement speed is merely one embodiment taught by Kamiwada et al. While said embodiment is not the exemplary embodiment taught by Kamiwada et al. it does not change the fact that said one embodiment is taught by Kamiwada et al.

Kamiwada et al. teach image displaying means (e.g., display image generating part 105) for displaying an exaggerated (e.g., enlarged/zoom-in) image representative of a picture of the object moving in the virtual 3D space viewed from the viewpoint ("In the conventional three-dimensional display controlling apparatus, the single three-dimensional shape can be displayed, rotated, and partially enlarged in a window of the browser." – p. 1, ¶ 7; "Accordingly, it is possible to automatically select the information object to be observed and other information objects to display based on a location relationship of the link information and the scale ratio in response to the movement direction such as … zoom-in, or zoom-out direction." – p. 2, ¶ 17; "In FIG. 16A showing information showing the entire information objects 2031 through 2035 on the three-dimensional data browsing screen 2030, when the viewpoint approaches along the

information object 2034 being the sphere, the information object 2034 being the sphere is enlarged so that information 2036 becomes visible." – p. 10, ¶ 165).

12. In regard to claim 2 Kamiwada et al. teach a size information determination means (e.g., view movement calculating parts 107) for determining size information indicative of a size of the object placed in the virtual 3D space, based on the distance data ("When the zoom-in operation is conducted, the viewpoint infinitely approaches the observation point 403 on the target surface 401 along the movement path 411. Moreover, when the zoom-out operation is conducted, the viewpoint moves so as to distance far from the target surface along the movement path 411…" – p. 4, ¶ 70; Figs. 16A-16D).

Kamiwada et al. teach a object enlargement and reduction means (e.g., information object displaying part 108) for enlarging (e.g., zoom-in) the object according the size information determined by the size information determination means, wherein the image displaying means displays an image representative of a picture of the object enlarged viewed from the viewpoint in the virtual 3D space ("Furthermore, when the viewpoint focuses on and approaches the information 2036 of the information object 2034 being the sphere, the information 2036 is displayed at the center of the three-dimensional data browsing screen 2030, enlarged while the information object 2034 being the sphere, and then, the information 2036 and the information object 2034 being the sphere are displayed in the entire screen as shown in FIG. 16C. When the viewpoint further approaches toward the information 2036, the information 2036 is enlarged as

shown in FIG. 16D, so as to see what the information 2036 looks like." – p. 10, ¶ 165; Figs. 16A-16D).

13. In regard to claim 3 Kamiwada et al. teach wherein the distance data is data indicative of a distance between a position associated with the object (e.g., observation point 403) and a position of the viewpoint (the rationale disclosed in the rejection of claim 1 is incorporated herein).

14. In regard to claim 5 Kamiwada et al. teach wherein said device comprises a CPU (e.g., processor) that controls the entire apparatus (p. 10, ¶ 157). The rationale disclosed in the rejection of claim 1 is incorporated herein. It is noted that said system is considered to perform a respective method.

15. In regard to claim 6 The rationale disclosed in the rejection of claim 1 is incorporated herein. Kamiwada et al. teach a computer readable data storage medium for causing a computer to perform the respective claim limitations (p. 2, ¶s 20, 25; p. 4, ¶s 64, 65; claims 7, 16).

16. In regard to claim 7 Kamiwada et al. teach an image processing device (e.g., computer; p. 1, ¶ 2; Fig. 2) for displaying an image representative of a picture of an object viewed from a viewpoint in a virtual 3D space where the object (e.g., observation point 403) and the viewpoint are placed, said object having distance of movement (e.g., movement distance) in the 3D space ("FIG. 15 is a diagram showing a display example of the three-dimensional data browsing screen. FIG. 16A through FIG. 16D are diagrams showing examples of changes of a three-dimensional data browsing screen in a case of approaching the viewpoint to the information object." – p. 3, ¶s 40, 41; "An

observation point 403 shows a location to be observed on the information object within a current view of the user. It should be noted that the observation point 403 is a intersection of a center line of the view and the target surface." – p. 4, ¶s 68, 71; "…the movement distance d of the observation point T is calculated. That is, the view determining part 104 calculates the movement distance d by giving the movement direction vector t obtained in the step S124 to the view movement calculating part 107. The view movement calculating part 107 calculates the movement distance of an observation point according to the distance of the viewpoint V0 and the observation point T…" – p. 6, ¶ 101; Figs. 4B, 11, 12A, 13, 15, 16A-16D).

Kamiwada et al. teach: a distance data calculation means (e.g., view determining part 104) for calculating distance data concerning the object (e.g., observation point 403) and the viewpoint (p. 6, ¶ 101); moving state determination means (e.g., view movement calculating part 107) for determining a moving distance (e.g., movement distance) of the object (e.g., observation point 403) in the virtual 3D space, based on the distance data (p. 6, ¶ 101); object moving means (e.g., view determining part 104) for moving the object in the virtual 3D space based on the moving distance of the object, which is determined by the moving state determination means ("…the view determining part 104 searches for a point which moves only by the distance d in the positive direction t along the target surface from the current observation point T as a new observation point T…" – p. 6, ¶ 102).

It is noted that the respective claim language discloses "whereby ... moving distance of the object in the three-dimensional space becomes larger as a direct result

of the value of the distance data becoming larger." However, it is noted that the respective claim language fails to disclose that said moving distance increases only as a direct result of said distance data first increasing. In other words said limitation merely discloses that there is a correlation between the increase in moving distance and distance data. Said limitation fails to disclose the specifics of said correlation.

Kamiwada et al. teach moving said observation point in a plurality of directions (e.g., up, down, left and right; "The movement directions of the observation point corresponding to the view movement instruction by the user, which indicates right and left and up and down, respectively, are shown by lines C_u and C_v with arrows." – p.5, ¶ 81) along a surface and calculating the distance of said observation point ("…the observation point 403 moves on the target surface." – ¶ 71; p. 6, ¶ 101). Kamiwada et al. teach wherein said surface is spherical (Fig. 6). It is inherent that calculations (e.g., such as distance calculations; Fig. 25) performed by said device are stored within memory for at least some period of time. Furthermore, it is inherent in light of the respective above 35 U.S.C. 112 second paragraph rejection that when said observation point is moved (e.g., moved up by some amount other than zero) along said surface (e.g., said spherical surface) that the distance between said moved observation point and said viewpoint increases (e.g., becomes larger) and that a respective value stored within said device for digitally representing said distance is updated accordingly. Otherwise said movement and the impact of said movement on said system would be lost. Thus, the limitation "whereby ... moving distance of the object in the three-

dimensional space becomes larger as distance data becomes larger" is considered to be met.

Kamiwada et al. teach image displaying means (e.g., display image generating part 105) for displaying an exaggerated (e.g., enlarged/zoom-in) image representative of a picture of the object moving in the virtual 3D space viewed from the viewpoint ("In the conventional three-dimensional display controlling apparatus, the single three-dimensional shape can be displayed, rotated, and partially enlarged in a window of the browser." – p. 1, ¶ 7; "Accordingly, it is possible to automatically select the information object to be observed and other information objects to display based on a location relationship of the link information and the scale ratio in response to the movement direction such as … zoom-in, or zoom-out direction." – p. 2, ¶ 17; "In FIG. 16A showing information showing the entire information objects 2031 through 2035 on the three-dimensional data browsing screen 2030, when the viewpoint approaches along the information object 2034 being the sphere, the information object 2034 being the sphere is enlarged so that information 2036 becomes visible." – p. 10, ¶ 165).

17. In regard to claim 8 the rationale disclosed in the rejection of claim 2 is incorporated herein.

18. In regard to claim 9 the rationale disclosed in the rejection of claim 3 is incorporated herein.

19. In regard to claim 11 the rationale disclosed in the rejection of claim 5 is incorporated herein.

20. In regard to claim 12 the rationale disclosed in the rejection of claim 6 is incorporated herein.

Claim Rejections - 35 USC § 103

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

22. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiwada et al. (U.S. Pub. No. US 2004/0141014 A1), as applied to claims 1-3, 5-9, 11 and 12, in view of Moran et al. (U.S. Patent No. 5, 880, 743).

23. In regard to claim 4 Kamiwada et al. teach the use of objects with predetermined sizes (p. 3, ¶ 57). It is noted that a "predetermined size" is considered a size which is determined at some point prior to the use of said size. However, Kamiwada et al. fail to explicitly teach wherein the size information determination means determines a rate by which the object is enlarged as the size information of the object based on the distance data, and the object enlargement and reduction means enlarges the object having a predetermined size by the rate. Moran et al. teach a method and system for animating graphic information (Abstract), wherein changes made to an object or objects are gradual at a visually apparent rate ("Whether the selection is freeform and/or structured, the system animates both the change to the selected object or group of objects, such as movement to a new location or expansion/shrinking, and the changing of the characteristics such as position or size of the other object or group of objects on the

screen which accompany such a change. The objects are shown as changing gradually at a visually apparent rate, rather than changing instantaneously." – col. 20, ll. 33-40).

It would have been obvious to one skilled in the art, at the time of the Applicant's invention, to incorporate the teaching of Moran et al. into the system taught by Kamiwada et al., because such incorporation would provide a visual presentation that is more pleasing to the eye as transitions (e.g., such as zooming in or zooming out) would be gradual rater than instantaneous as instantaneous chances may appear too abrupt to some viewers.

24. In regard to claim 10 the rationale disclosed in the rejection of claim 4 is incorporated herein.

Response to Arguments

25. The prior 35 U.S.C. 112 second paragrph rejection directed toward "means for" has been witdrawn in light of the applicant's remarks and after further cfonsideration.

26. In response to applicant's remarks that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., moving distance that increases only as a direct result of the value of the distance data first increasing) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

27. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

28. Applicant's remarks have been fully considered but they are not persuasive.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER-ANTHONY PAPPAS whose telephone number is (571) 272-7646. The examiner can normally be reached on M-F 9:00AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter-Anthony Pappas/
Primary Examiner, Art Unit 2628